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LONG-TERM CLINICAL OUTCOMES WITH EVEROLIMUS-ELUTING STENTS AND SIROLIMUS-ELUTING STENTS: AN UPDATED META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS

Poster Contributions
Poster Hall B1
Sunday, March 15, 2015, 9:45 a.m.-10:30 a.m.

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Authors: *Toshiaki Toyota, Hiroki Shiomi, Takeshi Morimoto, Takeshi Kimura, Kyoto University Graduate School of Medicine, Kyoto, Japan*

Background: The superiority of everolimus-eluting stents (EES) over sirolimus-eluting stents (SES) for long-term clinical outcomes has not been yet firmly established.

Methods: We conducted a systematic review and a meta-analysis of randomized controlled trials (RCTs) comparing EES directly with SES using the longest available follow-up data. We searched PubMed, the Cochrane database, and ClinicalTrials.gov. for RCTs comparing outcomes between EES and SES.

Results: We identified 13,434 randomly assigned patients from 14 RCTs. EES was associated with significantly lower risks than SES for definite stent thrombosis, definite/probable stent thrombosis, target-lesion revascularization, and major adverse cardiac events (pooled odds ratio (OR) 0.56, 95% confidence interval (CI) 0.35-0.90, P=0.02, OR 0.64, 95%CI 0.45-0.92, P=0.02, OR 0.83, 95%CI 0.70-0.98, P=0.03, and OR 0.86, 95%CI 0.76-0.96, P=0.01, respectively). The risks for all-cause death and myocardial infarction were similar between EES and SES. By the stratified analysis according to the timing after stent implantation, the favorable trend of EES relative to SES for stent thrombosis, target-lesion revascularization, and major adverse cardiac events was consistently observed both within and beyond 1-year. The lower risk of EES relative to SES for major adverse cardiac events beyond 1-year was statistically significant (OR 0.77, 95%CI 0.61-0.96, P=0.02).

Conclusion: In the current meta-analysis of 14 RCTs directly comparing EES with SES, EES as compared with SES was associated with significantly lower risk for definite stent thrombosis, definite/probable stent thrombosis, target-lesion revascularization, and major adverse cardiac events, suggesting that EES provided improvement in both safety and efficacy. The direction and magnitude of the effect beyond 1-year were comparable to those observed within 1-year.